Blythes Creek Recreational Use Attainability Analysis

July 2005

Prepared for:

UAA Review Committee
Water Quality Monitoring & Assessment Section
Water Protection Program

MISSOURI DEPARTMENT OF NATURAL RESOURCES

1101 Riverside Drive Jefferson City, MO 65102-0176

Prepared by: MEC WATER RESOURCES, INC.

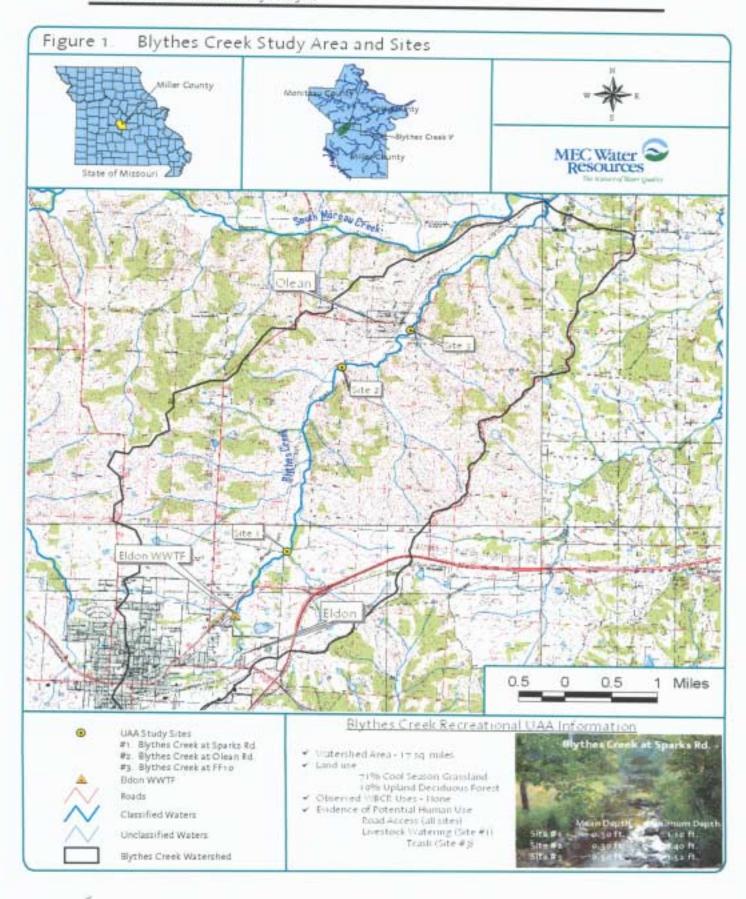
1000 North College Avenue, Suite 4 Columbia, Missouri 65201

Data Sheet A - Water Body Identification

Water Body Name: Blythes Creek (from USGS 7.5' quad) 8-digit HUC: 10300102 Missouri WBID # 0993 County: Miller Upstream Legal Description: NW ¼ of NE ¼ of Section 26, Township 42N, Range 15W Downstream Legal Description: NE ¼ of SE ¼ of Section 12, Township 42N, Range 15W Upstream Coordinates: 38.35897 latitude, -92.56086 longitude (USG 84, ddd,dddd) Downstream Coordinates: 38.40950 latitude, -92.52619 longitude (USG 84, ddd,dddd) Discharger Facility Name(s): Eldon WWTF Discharger Permit Number(s): MO0100676 Number of Sites Evaluated: 3 Name of Surveyor and Telephone Number: David Carani/573-443-4100 Organization: MEC Water Resources Position: Water Quality Specialist

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA datasheet is true and accurate.

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Signed:			Date:	7/11/05	



Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: 09		Site Location Description:						
Site Lat/Long: 38.37.	2	Site	5p	neks ROAD Brid	LE CEUSSINA			
Date & Time: 6/24/05	6:30		Facility Name:	Ė	Idon WWTP	, , , , ,		
Personnel: DC DL			Permit Number:	H	no-01006	6		
Current Weather Conditions: Survey 80F Weather Conditions for Past 7 days: # >85°								
Photo Ids: Upstream								
Used Observed*:								
☐ Swimming	☐ Skin Diving		SCUBA diving		Tubing	☐ Water Skiing		
☐ Wind surfing	☐ Kayaking		Boating		Wading	☐ Rafting		
☐ Hunting	☐ Trapping		Fishing		None of the above			
Describe: (include num								
evidence of recreations			outB,oqueey	O. u	iso, prioto docume	Treation of		
	·							
	•							
Surrounding Condition		orom	ote or impede recre	atio	onal uses. Attach pho	otos of evidence or		
unusual items of interest.)								
☐ City/county parks	☐ Playgrounds		MDC conservation	on	☐ Urban areas	□ Campgrounds		
		ļ	lands					
☐ Boating accesses	☐ State parks		National forests		☐ Nature trails	☐ Stairs/walkway		
☐ No trespass sign	▼ Fence		Steep slopes		☐ Other:			
-								
Evidence of Human U	se*:							
⊠Roads	□ Foot		☐ Dock/platforn	n		□ RV/ATV Tracks		
BRIDGE CROSSING	paths/print	S			Watering	,		
☐ Rope swings	☐ Camping Si	tes	☐ Fire pit/ring		☐ NPDES	☐ Fishing Tackle		
1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -					Discharge			
ØOther:			,					
Footpath likely	Footpath likely from cows in adjacent Field - picture 5							

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

^{*}Some of this information is not intended to directly influence a decision on any one particular recreational use analysis but may point to conditions that need further analysis or that effect another use.

Page Two - Data Sheet B for WBID #: 0993 5,74 /

Stream Morp Unstream V	hology: /iew Physical Dim	ensions: 5ec	Appendix B	in Report	···
☐ Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)		k. Depth(ft)
Run	Width(ft)	Length(ft)	Ave. Depth(ft)		c. Depth(ft)
☐ Pool	Width(ft)	Length(ft)	Ave. Depth(ft)		. Depth(ft)
⊠ Flow		es No	Estimated (ft³/s		
Downstream	m View Physical D	Dimensions: See	Appendix B	in Report	
☐ Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)		k. Depth(ft)
Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max	x. Depth(ft)
☐ Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max	Depth(ft)
⊠ Flow	Present?	(Es) No	Estimated (ft³/s	sec): 5An	ne as above
Substrate*:	(These values sho	ould add up to 100	%)		
20 %Cobb	le 50 %G	ravel 10 %Sa	and %Silt	%Mud/0	Clay 20 %Bedrock
Aquatic Ve	getation*: (note a	mount of vegetati	on or algal growth	at the assess	ment site)
LAYER O	of Algal grow	th on Rocks			
	•				
Odor:	racteristics*: (Mar			5.11	
Color:	☐ Sewage	☐ Musky	☐ Chemical	None □	☐ Other
Bottom	X Clear	☐ Green	☐ Gray	☐ Milky	☐ Other
Deposit:	☐ Sludge	☐ Solids	☐ Fine sediments	⊠ None	☐ Other
Surface Deposit:	□ Oil	☐ Scum	□ Foam	⊠ None	□ Other
			-		rviews) to this form.
more compreh	ensive understandi ision on the recrea	ng of water conditio	ns. Consequently, th	is information	ut rather is to provide a is not intended to directly further analysis or that
datasheet is t	rue and accurate				on reported on this UAA
Signed:	Kdialla	Dat	e: 2/11/05		
Organization:	MECWafe	Resource Po	e: <u> </u>	:pa/	

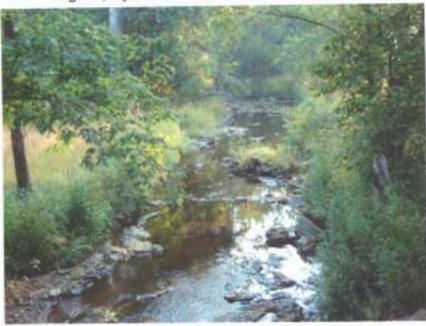


Figure 4. Blythes Creek Site 1 Downstream View

Mean depth along a 310 ft. assessment reach was 0.3 ft. as determined from 37 transects (Appendix B). The maximum depth observed at this location was 1.1 feet in a small pool within the assessment reach. Flow was measured as 0.40 cfs.

Livestock watering was the only sign of potential human use at this site. Fences impede access in the stream channel. The stream banks are gently sloping and not heavily vegetated and access to the stream is relatively easy. No individuals were seen or found to be available for interviews near the bridge during the survey.

MEC staff concludes that WBCR is neither an existing or an attainable use at this site based on limited access to the stream imposed by fences, absence of observed recreational uses, and low-flow, shallow conditions.

Site 2. Olean Road Bridge Crossing (38.40304, -92.53951) 3.59 miles from WWTF

The road crossing at Olean Road is located about 1.5 miles downstream from Site #1. Stream banks near the road are gently sloping and relatively easy to access (Figure 4). Riparian areas are wide and open and primarily vegetated by the upland deciduous forest complex (Figures 5 and 6) The stream channel was observed to be mostly bedrock with some cobble. Heavy algal growth was observed at this access point (Figure 7).

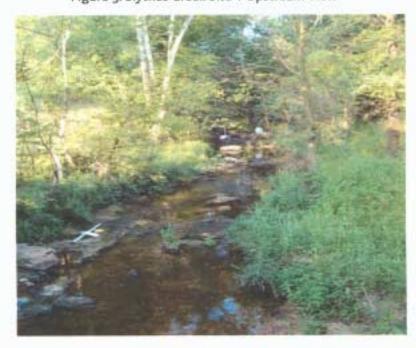
Mean depth along a 720 ft. assessment reach was 0.3 feet as determined from 29 transects (Appendix B). The maximum depth observed at this location was 1.4 feet in a small pool downstream of the road access. Flow was measured at 0.62 cfs.

stream. Banks are gently sloping and are vegetated with grasses, shrubs, and taller trees (Figures 3 and 4). Riparian areas are composed of trees and shrubs with some cool-season grasses associated with the grazing pasture nearby. Channel substrate was predominately gravel with cobble, bedrock, and sand present. Filamentous algal growth was present on the substrate throughout the reach.



Figure 2. Blythes Creek Site 1 Fence Across Stream Channel





Data Sheet B - Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #: 09	93		Site Location Desc	riptior	ı:		
Site Lat/Long: 38.403			Site 2	OLEA	N ROAD BRI	dae Crossing	
Date & Time: 6/24/05	- 19:45		Facility Name:	-Ida	WWTF	J .	
	W KK				0100676		
Current Weather Cond			Weather Condition	is for F	ast 7 days: 🌡	+ 785°	
Photo Ids: Upstream:	7, Down	stre	am: 8	Oth	er:10 algal gro.	ith	
Used Observed*:							
☐ Swimming	☐ Skin Diving		SCUBA diving	☐ Tub	ing	☐ Water Skiing	
☐ Wind surfing	☐ Kayaking		Boating	□ Wa	ding	☐ Rafting	
☐ Hunting	☐ Trapping	X	Fishing Fish checks		ne of the above		
Describe: (include number of individuals recreating, frequency of use, photo-documentation of evidence of recreational uses, etc. Surrounding Conditions*: (Mark all that promote or impede recreational uses. Attach photos of evidence or unusual items of interest.)							
☐ City/county parks	☐ Playgrounds		MDC conservatio	n 🗆	Urban areas	☐ Campgrounds	
☐ Boating accesses	☐ State parks		National forests		Nature trails	☐ Stairs/walkway	
□No trespass sign			Steep slopes		Other:		
Evidence of Human U							
BRIDGE CROSSING	☐ Foot paths/print:	S	☐ Dock/platform		ivestock Watering	□ RV/ATV Tracks	
☐ Rope swings	☐ Camping Si	tes	☐ Fire pit/ring		NPDES Discharge	☐ Fishing Tackle	
□ Other:							

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

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Page Two – Data Sheet B for WBID #: 0993 Site 2

tream Morph Upstream Vi	iology: iew Physical Dime	ensions: Sec	Appendix B	in Repor	<i>}</i>
☐ Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)		. Depth(ft)
Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max.	Depth(ft)
□ Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max.	Depth(ft)
X Flow	Present?	No No	Estimated (ft³/s	.62	
Downstream	n View Physical Di	mensions: Se	· Appendix B	in Repor	4-
□ Riffle	Width(ft)	Length(ft)	Áve. Depth(ft)	Max	. Depth(ft)
□ Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max.	Depth(ft)
☐ Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max.	Depth(ft)
E Flow	Present? (Ye	No	Estimated (ft³/s	ec): SEE	Above
Substrate*:	(These values sho	uld add up to 100	o%)		
10 %Cobbl	`		and %Silt	%Mud/C	lay 70 %Bedrock
A lot	getation*: (note ar of Algal 480 acteristics*: (Mark	wth - covere	ion or algal growth	at the assessr	nent site)
Odor:	☐ Sewage	☐ Musky	☐ Chemical	▼ None	☐ Other
Color:		☐ Green	□ Gray	☐ Milky	☐ Other
Bottom Deposit:	□ Sludge	□ Solids	☐ Fine sediments	⊠ None	□ Other
Surface Deposit:	□ Oil	□ Scum	□ Foam	🗷 None	□ Other
This information This comprehe	on is not to be used ensive understandin sion on the recreat	solely for removal g of water conditi	ons. Consequently, th	ct recreation bu is information	views) to this form. It rather is to provide a is not intended to direct further analysis or that
atasheet is tr	rue and accurate.				n reported on this UAA
igned:	V (devolla	d Da	te:		
rganization:	MECWAFE	Cesamo lupo	osition:	napel	





Figure 8. Blythes Creek Site 2 Algal Growth



Site 3. County Road FF-10 Bridge Crossing (38.40950, -92.52619) 4.72 miles from WWTF

County Road FF-10 is downstream from Site #2 and is near the town of Olean, Missouri. Stream banks are gently sloping, sparsely vegetated, and covered with rocks and brush

Human uses were not observed at this site. No individuals were seen or found to be available for interviews near the bridge crossing at the time of the survey. Filleted fish carcasses were observed directly under the bridge and were likely dumped from the bridge. MEC staff concludes that WBCR is neither an existing nor an attainable use at this site based on absence of observed recreational uses, low-flow, shallow conditions and heavy algal growth.



Figure 5. Blythes Creek Site 2 Access to Stream





Data Sheet B – Site Characterization

(A separate data sheet must be completed for each site)

Missouri WBID #:	993		Site Location Desc	riptjon:		
Site Lat/Long: 38.40	150/-92,5261			ounty ROAD FF B	Ridge Crossing	
Date & Time: 4/24/6			Facility Name:	Eldon WWTP	3	
	ow KK		Permit Number:	MO-010067	6	
Current Weather Cond	litions: 95° Hot/Sc	-amy	Weather Condition	ns for Past 7 days: Ho	>85°	
Photo Ids: Upstream			ım: 18		17-tire marks	
Used Observed*:				15 - Childrenii 19 - Bank Os- 20 -algal gio	n Stream un stream - Fh	
☐ Swimming	☐ Skin Diving		CUBA diving	☐ Tubing	☐ Water Skiing	
☐ Wind surfing	☐ Kayaking		Boating	□ Wading	☐ Rafting	
☐ Hunting	☐ Trapping	□ F	ishing	☐ None of the above	☑ Other	
Describe: (include num evidence of recreation	nber of individuals al uses, etc. 3	recre	eating, frequency of	of use, photo-documen Frogs/CRAWFish	tation of	
Surrounding Condition	ons*: (Mark all that p	oromo	ote or impede recrea	ational uses. Attach phot	cos of evidence or	
□City/county parks	☐ Playgrounds		MDC conservatio lands	n 🛘 Urban areas	☐ Campgrounds	
☐ Boating accesses	☐ State parks		National forests	☐ Nature trails	☐ Stairs/walkway	
□ No trespass sign	☐ Fence		Steep slopes	M Other: None of		
Evidence of Human U	se*:			,	in Appel	
⊠ Roads	☐ Foot		☐ Dock/platform	□ Livestock		
Bridge Crossing	paths/print			Watering	Rus Upstream	
☐ Rope swings	☐ Camping Si	tes	☐ Fire pit/ring	☐ NPDES Discharge	☐ Fishing Tackle	
B Other:						
Looks Like Fire ping but no charged wood - Maybe pienic site						
	•					

Site Locations Map(s): Attach a map of entire segment with assessment sites clearly labeled. Mark any other items that may be of interest. (Include photographs)

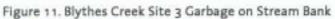
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Page Two – Data Sheet B for WBID #: 0993 5, te 3

Stream Morph Upstream V	nology: iew Physical Dimer	nsions: Spe	Appendix B	in Report	<u>_</u>
☐ Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)		Depth(ft)
Run	Width(ft)	Length(ft)	Ave. Depth(ft)		Depth(ft)
☐ Pool	Width(ft)	Length(ft)	Ave. Depth(ft)		Depth(ft)
⋉ Flow	Present?		Estimated (ft³/s		
Downstrean	n View Physical Dir	nensions:			
☐ Riffle	Width(ft)	Length(ft)	Ave. Depth(ft)	Max.	Depth(ft)
☐ Run	Width(ft)	Length(ft)	Ave. Depth(ft)	Max.	Depth(ft)
☐ Pool	Width(ft)	Length(ft)	Ave. Depth(ft)	Max.	Depth(ft)
⋈ Flow	Present? (Ye		Estimated (ft³/s	sec): 3 <i>EE</i>	Above
Substrate*:	(These values shou	ld add up to 100°	%)		
20 %Cobbl	e 60 %Gra	vel lO %Sa	nd %Silt	%Mud/Cl	ay 10 %Bedrock
Aquatic Veg	getation*: (note am	ount of vegetati	on or algal growth	at the assessm	nent site)
not as			t still present		
		,	,		
	acteristics*: (Mark a			T	· · · · · · · · · · · · · · · · · · ·
Odor: Color:	☐ Sewage	☐ Musky	☐ Chemical	Mone	☐ Other
	Ş∕r Clear	☐ Green	□ Gray	☐ Milky	☐ Other
Bottom Deposit:	☐ Sludge	☐ Solids	☐ Fine sediments	⊠ None	☐ Other
Surface Deposit:	□ Oil	□ Scum	□ Foam	☑ None	□ Other
This informatio	on is not to be used s	olely for removal o	of whole body contac	ct recreation but	views) to this form.
nore comprehe nfluence a deci effect another u	sion on the recreatio	of water condition use analysis but	ns. Consequently, the may point to condit	nis information is ions that need f	s not intended to directl urther analysis or that
latasheet is tr	ue and accurate.				reported on this UAA
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Organization:	Wollen MEC Woh	Resonupos	ition: Prince	ipal	
		The.			•



Figure 10. Blythes Creek Site 3 Downstream View





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MEC Water Resources, Inc.

Blythes Creek Recreational Use Attainability Analysis

(Figure 6). Riparian area is generally less than 50 ft. wide on both sides of the stream and consists of larger trees, brush, and some grassy areas (Figure 7). Stream substrate consisted mainly of gravel with some cobble and sand present.

Mean depth along a 840 ft. assessment reach was 0.50 feet as determined from 24 transects (Appendix B). The maximum depth observed at this location was 1.52 feet in a pool downstream of the road access. Observed streamflow was 0.42 cfs.

Upon arriving at the bridge crossing, MEC staff observed 3 children attempting to catch frogs and crayfish in the stream. All terrain vehicle tracks were also observed entering the stream at the bridge crossing. Garbage and food leftovers were observed about 100 feet upstream from the bridge crossing on a sandy area on the stream bank (Figure 8).

MEC staff concludes that WBCR is neither an existing nor an attainable use at this site based on the low-flow, shallow conditions. Potential Secondary Contact Recreation (SCR) activities were observed at Site 3 however WBCR activities were not.



Figure 9. Blythes Creek Site 3 Children Playing Near Stream (Upstream View)